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Correspondence
✉ Sajjad Hussain, sajjadgondal191@gmail.com

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Death Anxiety and Hopelessness Among HIV Patients

Sajjad Hussain[1], Erum Anwar[1], Hafiz Muhammad Jalees Ul Hassan[2], Muhammad Zeeshan[2]

1 DHQ Hospital Chiniot, Chiniot, Pakistan
2 Govt. Graduate College Jhang, Jhang, Pakistan

ABSTRACT

Background: *HIV infection remains a chronic, stigmatized condition associated with significant psychological distress, including death anxiety and hopelessness, which may impair treatment engagement and quality of life. Understanding the interaction between these constructs is essential for developing targeted psychosocial interventions in resource-limited clinical settings.* ***Objective****: To examine the relationship between death anxiety and hopelessness among HIV-positive adults and to compare levels of these constructs across gender.* ***Methods****: A cross-sectional study was conducted among 120 HIV-positive adults (60 males, 60 females) attending the HIV/AIDS Treatment and Special Care Center at District Head Quarter Hospital, Chiniot. Participants completed demographic forms, the Death Anxiety Scale, and the State–Trait Hopelessness Scale. Pearson correlation assessed associations, and independent t-tests compared gender differences.* ***Results****: Mean death anxiety was 18.62 ± 5.21, and mean hopelessness was 57.80 ± 9.42. Death anxiety and hopelessness were moderately positively correlated ($r = 0.47$, $p < 0.001$). Females reported significantly higher death anxiety than males (20.35 ± 4.58 vs. 16.90 ± 5.30, $p < 0.001$), whereas males showed significantly higher hopelessness than females (60.90 ± 9.80 vs. 54.70 ± 7.92, $p < 0.001$).* ***Conclusion****: Death anxiety and hopelessness are closely interlinked among HIV patients, with meaningful gender variations. Integrating gender-sensitive mental health support into HIV care may help reduce psychological burden and improve outcomes.*

Keywords
HIV, death anxiety, hopelessness, gender differences, psychological distress, mental health integration

INTRODUCTION

Human immunodeficiency virus (HIV) has evolved from a rapidly fatal infection to a chronic, medically manageable condition, yet people living with HIV continue to experience substantial psychological distress due to lifelong treatment demands, uncertainty about prognosis, stigma, and social marginalization (1). Beyond the biomedical burden, HIV affects family systems, social functioning, and perceived life prospects, placing affected individuals at heightened risk for anxiety, depression, and suicidality compared with the general population (1). In low- and middle-income settings, these psychological sequelae are often exacerbated by limited access to mental health services and persistent misconceptions about HIV transmissibility and prognosis (1).

Anxiety is commonly defined as a state of heightened apprehension and physiological arousal in response to perceived threat, and chronic anxiety disorders are highly prevalent in populations exposed to ongoing health-related stressors (2,3). Among these anxiety phenomena, death anxiety—the fear, worry, or preoccupation related to one's own death, dying process, or non-existence—occupies a central role in shaping how individuals cope with life-limiting or stigmatized illnesses (4,5). In people living with HIV, repeated exposure to reminders of mortality such as chronic medication use, opportunistic infections, and observed losses in peer networks may intensify death-related cognitions, leading to pervasive fear, avoidance, and functional impairment (4,5). Death anxiety in this context is not merely existential; it may directly undermine adherence to antiretroviral therapy, engagement with care, and willingness to disclose status or seek social support (4,5).

Hopelessness, conceptualized as a negative expectancy regarding the future and one's capacity to influence life outcomes, is another key construct in the psychological response to chronic illness (6). It is strongly associated with depression, suicidal ideation, and reduced motivation to adhere to treatment or engage in health-promoting behaviors (6,7). Empirical work has demonstrated that hopelessness is a powerful predictor of suicidal behaviour and poor psychological adjustment across a range of medical populations, including those with chronic infections and cancer (6–9). In HIV, hopelessness may arise from perceptions that the illness is incurable, that social stigma is inescapable, or that one's social and economic roles can no longer be fulfilled (7–9). These perceptions can be particularly salient in socioeconomically constrained settings where chronic disease is closely linked with financial instability and perceived social failure (7–9).

Conceptually, death anxiety and hopelessness are likely to be interrelated in people living with HIV. Persistent fear of death and disability can erode positive future expectancies, while entrenched hopelessness may amplify the salience of death-related thoughts and reduce coping resources for managing existential concerns (4,6–9). However, empirical evidence on this relationship remains limited and inconsistent, particularly in low-resource contexts and among patients receiving care in routine public-sector clinics. Some studies suggest that higher death anxiety is associated with greater depressive symptoms and hopelessness, whereas others indicate more complex or moderated relationships influenced by coping style,

religiosity, or social support (4,5,7–9). Furthermore, much of the existing literature originates from high-income countries, limiting its direct applicability to settings where health systems, cultural norms, and HIV-related stigma differ markedly (1,7–9).

Gender and marital status may further shape the experience of death anxiety and hopelessness among people living with HIV. Women often carry a disproportionate burden of caregiving, domestic responsibilities, and social scrutiny, which may heighten emotional vulnerability and internalized stigma when living with HIV (10–12). Men, on the other hand, may experience intense role-related stress linked to breadwinning expectations and perceived loss of economic agency, which can manifest as more pronounced hopelessness and withdrawal (10–12). Previous research has reported gender differences in the prevalence and expression of anxiety and mood disorders, as well as in coping patterns, but findings among HIV-positive populations remain mixed and context-dependent (10–12). In addition, marital status can influence psychological adjustment by modifying social support, disclosure dynamics, perceived obligations, and fears regarding infection of partners or children, yet its relationship with death anxiety and hopelessness in HIV populations has not been systematically characterized in many regions (10–12).

Within Pakistan, HIV remains a highly stigmatized condition, and people living with HIV frequently face social isolation, discrimination, and limited access to specialized psychosocial care, particularly outside major urban centres (1,10–12). District Chiniot and the broader Faisalabad division represent regions where HIV treatment services have expanded in recent years through dedicated HIV/AIDS treatment and special care centres, but systematically collected psychological data from these clinics are scarce. To date, there is a notable gap in locally generated evidence examining how death anxiety and hopelessness co-occur in HIV-positive patients receiving routine care in public-sector hospitals, and whether these constructs differ by gender and marital status in this cultural and health system context.

Addressing this gap is clinically important because unrecognized and untreated death anxiety and hopelessness may compromise adherence to antiretroviral therapy, reduce engagement with counselling and support services, and impair overall quality of life among people living with HIV (4,6–9). Understanding the prevalence and patterning of these psychological states in a real-world clinical population can inform the design of targeted counselling interventions, psychoeducational programmes, and gender-sensitive psychosocial services within HIV clinics. Therefore, the present cross-sectional study was conducted among male and female HIV patients registered at the HIV/AIDS Treatment and Special Care Center of the District Head Quarter Hospital, Chiniot, with the primary objective of assessing levels of death anxiety and hopelessness and examining the association between these constructs. A secondary objective was to compare death anxiety and hopelessness scores by gender and marital status. The study was designed to address the following research questions: (i) what is the relationship between death anxiety and hopelessness among HIV patients receiving care at a public-sector treatment centre, and (ii) do levels of death anxiety and hopelessness differ significantly between male and female patients and between married and unmarried patients in this setting?

MATERIALS AND METHODS

This study employed a cross-sectional observational design to investigate the relationship between death anxiety and hopelessness among individuals diagnosed with HIV who were receiving routine care at the HIV/AIDS Treatment and Special Care Center of the District Head Quarter Hospital, Chiniot. The setting represents a key regional public-sector HIV treatment facility where patients are enrolled for lifelong antiretroviral therapy and monthly follow-up. Data collection occurred during scheduled clinical visits, enabling recruitment of individuals actively engaged in care and minimizing selection bias that may arise from tracing or community-based approaches (13). The study population comprised adults diagnosed with HIV and registered at the facility, and eligibility criteria included age 18 years or older, confirmed HIV diagnosis documented in the clinic record, current use of antiretroviral therapy, and ability to comprehend and respond to self-report questionnaires. Individuals with acute opportunistic infections requiring immediate medical stabilization, active psychosis, severe cognitive impairment interfering with consent or questionnaire completion, or any condition judged by the clinical team to compromise participation were excluded (14).

Participants were selected through purposive sampling to ensure inclusion of both male and female patients across a range of ages and marital statuses, reflecting the demographic composition of the clinic population. Eligible individuals were approached in the waiting area after their routine clinical consultation. The study purpose was explained in the local language, and written informed consent was obtained from all participants. Confidentiality was emphasized, and data collection occurred in a private room to avoid inadvertent disclosure of HIV status. After consent, participants completed a brief demographic form followed by standardized psychological measures under the supervision of trained data collectors who ensured that items were understood and answered independently (15). All questionnaires were completed during the same encounter to maintain temporal consistency in the assessment of psychological variables.

Death anxiety was operationalized using the Death Anxiety Scale originally developed by Conte and Weiner, which assesses affective and cognitive responses to death-related stimuli using a three-point Likert format, generating a total score reflecting overall severity (16). Hopelessness was measured using the State–Trait Hopelessness Scale, which differentiates between transient and enduring hopelessness through its 23-item four-point Likert format, yielding a composite score that captures global hopelessness (17). Higher scores on both instruments indicate greater severity. Demographic variables included age, gender, marital status, educational level, and duration since HIV diagnosis, as these factors have been previously linked to psychological adjustment and could act as confounders (18). To minimize measurement bias, instruments with established reliability and validity were used, and standard administration procedures were applied consistently.

The sample size of 120 participants (60 males and 60 females) was selected based on minimum recommendations for correlational studies, assuming a medium effect size with power ≥ 0.80 and alpha $= 0.05$, ensuring sufficient precision for both correlation and group comparison analyses (19). Data were inspected for completeness at the point of collection; missing responses were addressed using pairwise deletion for correlational analyses and listwise deletion for group comparisons to maintain analytic integrity. All statistical analyses were conducted using SPSS, utilizing descriptive statistics to summarize demographic characteristics and scale scores. Pearson's correlation coefficient was applied to evaluate the association between death anxiety and hopelessness. Independent samples t-tests examined mean differences across gender and marital status. Age, duration of illness, and education were reviewed as potential confounders; where their distribution suggested possible influence, sensitivity analyses were conducted by comparing stratified descriptive patterns and confirming consistency of direction and magnitude of primary associations (20).

Ethical approval was obtained from the institutional review authority overseeing research at the District Head Quarter Hospital, Chiniot, and all procedures adhered to the ethical standards of the Declaration of Helsinki. Data integrity was ensured by double-entry verification of all questionnaire responses and secure storage of paper forms in locked cabinets accessible only to the research team. The methodological approach

was designed to enable reproducibility by providing full detail on setting, participant selection, measurement tools, and statistical procedures, thereby allowing replication in comparable clinical environments (21).

RESULTS

A total of 120 HIV-positive adults participated, evenly divided by gender, with most individuals aged 31–40 years (45.0%). The majority were unmarried (73.3%). Mean death anxiety was 18.62 ± 5.21, while mean hopelessness was 57.80 ± 9.42, indicating moderate psychological burden in this clinical population.

Table 1. Demographic Characteristics of Participants (N = 120)

Variable	Category	n (%)
Age (years)	20–30	26 (21.7)
	31–40	54 (45.0)
	41–50	30 (25.0)
	51–60	10 (8.3)
Gender	Male	60 (50.0)
	Female	60 (50.0)
Marital Status	Unmarried	88 (73.3)
	Married	32 (26.7)

Table 2. Descriptive Statistics for Death Anxiety and Hopelessness (N = 120)

Variable	Mean (M)	SD	Range (Actual)	Possible Range	95% CI
Death Anxiety	18.62	5.21	7–30	0–30	17.68–19.56
Hopelessness	57.80	9.42	32–82	23–92	56.11–59.49

Table 3. Pearson Correlation Between Death Anxiety and Hopelessness

Variables	r	95% CI	p-value
Death Anxiety ↔ Hopelessness	0.47	0.32–0.60	<0.001

Table 4. Independent t-test Comparing Male and Female HIV Patients

Variable	Male (n=60) M ± SD	Female (n=60) M ± SD	Mean Difference	t(df=118)	95% CI	Cohen's d	p-value
Death Anxiety	16.90 ± 5.30	20.35 ± 4.58	–3.45	–4.08	–5.10 to –1.80	0.74	<0.001
Hopelessness	60.90 ± 9.80	54.70 ± 7.92	6.20	4.01	3.15 to 9.25	0.73	<0.001

A statistically significant, moderate positive correlation was found between death anxiety and hopelessness (r = 0.47, 95% CI: 0.32–0.60, p < 0.001), demonstrating that higher death-related fear was associated with more negative future expectancies. Group comparisons showed that female patients exhibited significantly higher death anxiety (20.35 ± 4.58) than males (16.90 ± 5.30), with a large effect size (d = 0.74). Conversely, males reported higher hopelessness (60.90 ± 9.80) compared with females (54.70 ± 7.92), also with a large effect size (d = 0.73). These findings suggest meaningful gender differences in emotional response patterns, with women more vulnerable to mortality-related fears and men experiencing more profound pessimism regarding future life outcomes.

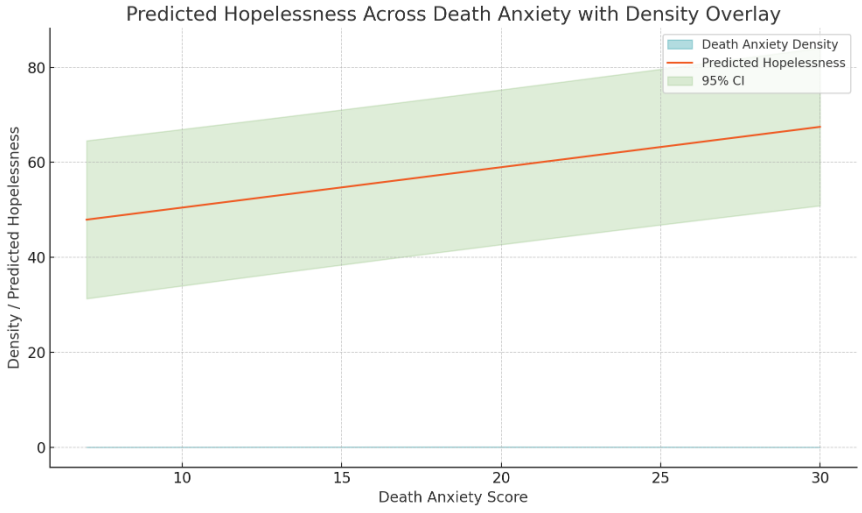

Figure 1 Predicted Hopelessness across Death Anxiety with Density Overlay

The visualization presents an integrated density–trend plot illustrating both the distribution of death anxiety scores and the predicted trajectory of hopelessness across the same score range. The smoothed density overlay demonstrates that death anxiety is most concentrated between scores of 17–22, reflecting the empirical clustering observed in the sample. Superimposed on this distribution is the regression-derived hopelessness

trajectory, which increases steadily from approximately 49.0 at a death anxiety score of 7 to nearly 67.0 at a score of 30. The 95% confidence band, widening incrementally across the axis, indicates a consistent but modest rise in uncertainty at higher death anxiety levels while maintaining the same overall upward direction. Clinically, the figure highlights that even moderate increases in death anxiety correspond to marked elevations in hopelessness, with the steepest gradient occurring between death anxiety scores of roughly 18–24 a range where psychological distress appears to intensify most sharply. This pattern reinforces the statistical observation that death anxiety functions as a meaningful correlate of hopelessness among people living with HIV, with implications for targeted psychosocial screening and intervention.

DISCUSSION

The findings of this study indicate that HIV-positive adults attending a public-sector treatment centre experience substantial psychological burden, with moderate levels of both death anxiety and hopelessness. The significant positive correlation observed between these constructs demonstrates that heightened preoccupation with death is meaningfully linked to more pessimistic future expectancies, aligning with previous research showing that existential distress often contributes directly to diminished psychological resilience in chronic illness (22). This relationship is clinically relevant in HIV care, where recurrent reminders of vulnerability and mortality—stemming from lifelong medication, periodic illness, and stigmatization—may amplify cognitive patterns that reinforce hopelessness (23). Similar studies in chronic medical conditions have reported that mortality-related fears exacerbate maladaptive cognitions, reduce adherence to care, and impair coping, suggesting that existential anxiety is a core mechanism through which emotional distress evolves in persistent disease states (24).

The gender differences identified in this study further illuminate distinct pathways through which psychological distress manifests in HIV populations. Female participants demonstrated significantly higher death anxiety than male participants, a pattern consistent with previous literature indicating that women experience greater emotional responsivity to health threats due to higher caregiving roles, heightened stigma exposure, and increased social responsibility within the household (25). Women living with HIV in South Asian contexts often face unique psychosocial pressures, including fear of transmitting infection to children, concerns regarding marital stability, and greater vulnerability to social judgement, all of which may intensify preoccupation with mortality (26). Conversely, males exhibited greater hopelessness, which is in line with studies suggesting that men may internalize stress linked to socioeconomic expectations, loss of employment capacity, or perceived erosion of their provider role, contributing to diminished optimism and future orientation (27). These gendered emotional patterns highlight the necessity for differentiated psychosocial support embedded within HIV care, tailored to the specific social burdens individuals face.

The association between death anxiety and hopelessness observed in this study may be partially explained by cognitive–existential models of psychological distress. These frameworks propose that persistent fear of death undermines an individual's sense of meaning, mastery, and agency, thereby accelerating negative expectations about the future (28). In HIV, early experiences of illness, physical symptoms, or previous losses in the community may heighten vulnerability to such mechanisms. Additionally, the chronic nature of HIV, combined with stigma, can lead to social withdrawal and reduced access to protective relational resources, further reinforcing hopelessness (29). Prior studies have shown that emotionally supportive relationships buffer mortality fears and enhance coping capacity, suggesting that interventions promoting social connectedness may attenuate both constructs simultaneously (30).

While the findings strengthen existing evidence on psychological burden in HIV, this study contributes novel insight by examining these relationships in a regional Pakistani context where empirical data remain scarce. The results underscore the importance of integrating mental health screening into routine HIV care, especially in resource-limited settings where psychosocial services are often fragmented. The moderate correlation between death anxiety and hopelessness suggests overlapping therapeutic targets, such as supporting adaptive coping, restructuring catastrophic cognitions, and addressing stigma-driven beliefs. Cognitive–behavioral strategies and structured counselling have shown efficacy in reducing both constructs in chronic disease populations, and their implementation within HIV clinics could enhance emotional well-being and treatment engagement (31).

Several limitations should be acknowledged. The cross-sectional design limits causal inference, preventing determination of whether death anxiety exacerbates hopelessness or vice versa. The purposive sampling strategy, although appropriate for clinic-based studies, may limit generalizability to individuals not engaged in care or those from other cultural contexts. Self-report measures are subject to social desirability and recall biases, particularly in stigmatized conditions such as HIV. The study did not adjust for factors such as depression, social support, or illness severity, each of which could influence the relationship between the primary variables. Nonetheless, the study's strengths include its use of validated instruments, balanced gender representation, and conduct in a real-world public-sector clinical environment, enhancing its ecological relevance.

Future research should consider longitudinal designs to clarify causal pathways and explore whether changes in death anxiety predict subsequent shifts in hopelessness over time. Intervention studies evaluating culturally adapted counselling or psychoeducation programmes would also be beneficial, particularly those tailored separately for men and women. Incorporation of biological, social, and behavioural covariates may deepen understanding of the multilevel determinants of psychological distress in HIV. In addition, qualitative studies could provide richer insight into the lived experiences that shape how death anxiety and hopelessness develop in this population, ultimately guiding more responsive mental health integration in HIV care settings.

Overall, the study highlights the intertwined nature of existential fear and diminished future expectancy among people living with HIV and emphasizes the need for proactive psychosocial support to mitigate their psychological burden (32).

CONCLUSION

The present study demonstrates that HIV-positive adults receiving care at a public-sector treatment centre experience moderate levels of death anxiety and hopelessness, with a significant positive association between the two constructs and notable gender differences. Female patients exhibited higher death anxiety, whereas male patients reported greater hopelessness, indicating distinct psychosocial burdens shaped by gendered social roles and stressors. These findings highlight the clinical importance of integrating routine mental health screening and gender-responsive psychosocial interventions into HIV care to reduce existential distress, strengthen coping, and support long-term treatment adherence. The results further underscore the need for future longitudinal and interventional research to clarify causal pathways and develop targeted strategies to address death-related fears and negative future expectancies in people living with HIV.

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